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Serial No. 09/856,070In the Claims

This listing of claims will replace all prior versions and listings of claims in this application.

1-30 (cancelled).

31 (currently amended). An isolated molecule which ~~comprises~~ consists of an amino acid sequence that binds to the hepreceptor, wherein said hepreceptor binding sequence consists of at least 5 consecutive amino acids of SEQ ID NO. 29.

32 (previously presented). The molecule, according to claim 31, wherein the hepreceptor binding sequence consists of at least 5 consecutive amino acids located at positions 1-13 in SEQ ID NO.:29.

33 (previously presented). The molecule, according to claim 31, wherein said hepreceptor binding sequence consists of from 5 to 14 amino acids.

34 (currently amended). An isolated molecule which ~~comprises~~ consists of an amino acid sequence that binds to the hepreceptor, wherein said hepreceptor binding sequence consists of an amino acid sequence selected from the group consisting of:

MREKEELMLRLQDXaaEEKTKKAERELSEQIQRALQ (SEQ ID NO. 2);

EREKE (SEQ ID NO. 16);

EREKEQMMREKEEL (SEQ ID NO. 17);

KEELM (SEQ ID NO. 18);

KEELMLRLQDYEE (SEQ ID NO. 19);

KEELMLRLQDYpEE (SEQ ID NO. 20);

EELMLRLQDYEE (SEQ ID NO. 21);

EELMLRLQDYpEE (SEQ ID NO. 22);

ELMLRLQDYEE (SEQ ID NO. 23);

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ELMLRLQDYpEE (SEQ ID NO. 24);

MLRLQ (SEQ ID NO. 25);

QDYEE (SEQ ID NO. 26); and

QDYpEE (SEQ ID NO. 27).

35 (previously cancelled).

36 (previously presented). The molecule, according to claim 34, which consists of:  
MREKEELMLRLQDXaaEEKTKKAERELSEQIQRALQ (SEQ ID NO. 2).

37-49 (cancelled).

50 (previously presented). The molecule, according to claim 34, which consists of:  
EREKE (SEQ ID NO. 16).

51 (previously presented). The molecule, according to claim 34, which consists of:  
EREKEQMMREKEEL (SEQ ID NO. 17).

52 (previously presented). The molecule, according to claim 34, which consists of:  
KEELM (SEQ ID NO. 18).

53 (previously presented). The molecule, according to claim 34, which consists of:  
KEELMLRLQDYEE (SEQ ID NO. 19).

54 (previously presented). The molecule, according to claim 34, which consists of:  
KEELMLRLQDYpEE (SEQ ID NO. 20).

55 (previously presented). The molecule, according to claim 34, which consists of:  
EELMLRLQDYEE (SEQ ID NO. 21).

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56 (previously presented). The molecule, according to claim 34, which consists of:  
EELMLRLQDYpEE (SEQ ID NO. 22).

57 (previously presented). The molecule, according to claim 34, which consists of:  
ELMLRLQDYEE (SEQ ID NO. 23).

58 (previously presented). The molecule, according to claim 34, which consists of:  
ELMLRLQDYpEE (SEQ ID NO. 24).

59 (previously presented). The molecule, according to claim 34, which consists of:  
MLRLQ (SEQ ID NO. 25).

60 (previously presented). The molecule, according to claim 34, which consists of:  
QDYEE (SEQ ID NO. 26).

61 (previously presented). The molecule, according to claim 34, which consists of:  
QDYpEE (SEQ ID NO. 27).

62 (currently amended). A method for upregulating the immune system in a patient with cancer, HHV Human Immunodeficiency Virus (HIV), or a bacterial infection, wherein said method comprises administering, to a patient with cancer, HHV Human Immunodeficiency Virus (HIV), or a bacterial infection, an effective amount of a molecule which ~~comprises~~ consists of an amino acid sequence that binds to the hepreceptor, wherein said hepreceptor binding sequence consists of at least 5 consecutive amino acids of SEQ ID NO. 29; wherein the administration of said molecule results in upregulation of the immune system in the patient.

63 (cancel).

64 (cancel).

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65 (previously presented). The method, according to claim 64, wherein said hepreceptor binding sequence has between 5 and 14 amino acids.

66 (currently amended). The method, according to claim 64, wherein said molecule ~~comprises~~ consists of an amino acid sequence selected from the group consisting of:

MREKEELMLRLQDX<sub>aa</sub>EEKTKKAERELSEQIQRALQ (SEQ ID NO. 2);

~~TEKKR (SEQ ID NO. 3);~~

~~TEKKRRETIV (SEQ ID NO. 4);~~

~~TEKKRRETVER (SEQ ID NO. 5);~~

~~KKRRE (SEQ ID NO. 6);~~

~~KKRRETVE (SEQ ID NO. 7);~~

~~KKRRETVERE (SEQ ID NO. 8);~~

~~KKRRETVEREK (SEQ ID NO. 9);~~

~~KKRRETVEREKE (SEQ ID NO. 10);~~

~~KRRRETVER (SEQ ID NO. 11);~~

~~KRRRETVEREK (SEQ ID NO. 12);~~

EREKE (SEQ ID NO. 16);

EREKEQMMREKEEL (SEQ ID NO. 17);

KEELM (SEQ ID NO. 18);

KEELMLRLQDYEE (SEQ ID NO. 19);

KEELMLRLQDYpEE (SEQ ID NO. 20);

EELMLRLQDYEE (SEQ ID NO. 21);

EELMLRLQDYpEE (SEQ ID NO. 22);

ELMLRLQDYEE (SEQ ID NO. 23);

ELMLRLQDYpEE (SEQ ID NO. 24);

MLRLQ (SEQ ID NO. 25);

QDYEE (SEQ ID NO. 26); and

QDYpEE (SEQ ID NO. 27).

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67 (withdrawn). A method for treating tumors wherein said method comprises administering, to a patient in need of such treatment, an effective amount of a molecule which binds to at least one domain of the Heparin Receptor.

68 (withdrawn). The method, according to claim 67, wherein said molecule is charged.

69 (withdrawn). The method, according to claim 67, wherein said molecule comprises an amino acid sequence identical to all or part of the Heparin Receptor.

70 (withdrawn). The method, according to claim 69, wherein said molecule comprises between 5 and 13 amino acids which are identical to the Heparin Receptor.

71 (withdrawn). The method, according to claim 67, wherein said molecule comprises an amino acid sequence selected from the group consisting of:

AREEKHQKQLERQQLETEKKRRETVEREKEQM (SEQ ID NO. 1);

MREKEELMLRLQDY<sub>(p)</sub>EEKTKKAERELSEQIQRALQ (SEQ ID NO. 2);

TEKKR (SEQ ID NO. 3);

TEKKRRETV (SEQ ID NO. 4);

TEKKRRETVER (SEQ ID NO. 5);

KKRRE (SEQ ID NO. 6);

KKRRETVE (SEQ ID NO. 7);

KKRRETVERE (SEQ ID NO. 8);

KKRRETVEREK (SEQ ID NO. 9);

KKRRETVEREKE (SEQ ID NO. 10);

KRRETVER (SEQ ID NO. 11);

KRRETVEREK (SEQ ID NO. 12);

KRRETVEREKE (SEQ ID NO. 13);

RRETV (SEQ ID NO. 14);

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RETVEREKE (SEQ ID NO. 15);  
EREKE (SEQ ID NO. 16);  
EREKEQMMREKEEL (SEQ ID NO. 17);  
KEELM (SEQ ID NO. 18);  
KEELMLRLQDYEE (SEQ ID NO. 19);  
KEELMLRLQDYpEE (SEQ ID NO. 20);  
EELMLRLQDYEE (SEQ ID NO. 21);  
EELMLRLQDYpEE (SEQ ID NO. 22);  
ELMLRLQDYEE (SEQ ID NO. 23);  
ELMLRLQDYpEE (SEQ ID NO. 24);  
MLRLQ (SEQ ID NO. 25);  
QDYEE (SEQ ID NO. 26);  
QDYpEE (SEQ ID NO. 27); and  
TEKKRRETVEREKE (SEQ ID NO. 28).

72 (withdrawn). A method for treating HIV wherein said method comprises administering, to a patient in need of such treatment, an effective amount of a molecule which binds to at least one domain of the Hepreceptor, and wherein said molecule is not Hep 1.

73 (withdrawn). The method, according to claim 72, wherein said molecule is charged.

74 (withdrawn). The method, according to claim 72, wherein said molecule comprises an amino acid sequence identical to all or part of the Hepreceptor.

75 (withdrawn). The method, according to claim 74, wherein said molecule comprises between 5 and 13 amino acids which are identical to the Hepreceptor.

76 (withdrawn). The method, according to claim 72, wherein said molecule comprises an amino acid sequence selected from the group consisting of:

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AREEKHQKQLERQQLETEKKRRETVEREKEQM (SEQ ID NO. 1);  
MREKEELMLRLQDY<sub>(p)</sub>EEKTKKAERELSEQIQRALQ (SEQ ID NO. 2);  
TEKKR (SEQ ID NO. 3);  
TEKKRRETV (SEQ ID NO. 4);  
TEKKRRETVER (SEQ ID NO. 5);  
KKRRE (SEQ ID NO. 6);  
KKRRETVE (SEQ ID NO. 7);  
KKRRETVERE (SEQ ID NO. 8);  
KKRRETVEREK (SEQ ID NO. 9);  
KKRRETVEREKE (SEQ ID NO. 10);  
KRRETVER (SEQ ID NO. 11);  
KRRETVEREK (SEQ ID NO. 12);  
KRRETVEREKE (SEQ ID NO. 13);  
RRETV (SEQ ID NO. 14);  
RETVEREKE (SEQ ID NO. 15);  
EREKE (SEQ ID NO. 16);  
EREKEQMMREKEEL (SEQ ID NO. 17);  
KEELM (SEQ ID NO. 18);  
KEELMLRLQDYEE (SEQ ID NO. 19);  
KEELMLRLQDY<sub>p</sub>EE (SEQ ID NO. 20);  
EELMLRLQDYEE (SEQ ID NO. 21);  
BELMLRLQDY<sub>p</sub>EE (SEQ ID NO. 22);  
ELMLRLQDYEE (SEQ ID NO. 23);  
ELMLRLQDY<sub>p</sub>EE (SEQ ID NO. 24);  
MLRLQ (SEQ ID NO. 25);  
QDYEE (SEQ ID NO. 26); and  
QDY<sub>p</sub>EE (SEQ ID NO. 27).

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